



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III

1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

NOV 6 2017

Mr. David Whitehurst
Department of Environmental Quality
629 East Main Street, P.O. Box 1105
Richmond, VA 23218

Re: EPA Comments on VADEQ Proposed Rulemaking on Virginia WQS Review

Dear Mr. Whitehurst:

The U.S. Environmental Protection Agency (EPA), Region III has reviewed the proposed amendments to Virginia Water Quality Standards (WQS) Regulations (9 VAC 25-260). These amendments, which Virginia Department of Environmental Quality (VADEQ) announced for public review and comment on September 18, 2017, constitute Virginia's updates to its aquatic life ammonia and cadmium criteria, revisions to bacteria criteria for human health protection in recreation waters, and amendments to update 94 human health criteria.

The purpose of this letter is to provide EPA's comments on the proposal. Please note the comments and recommendations contained in this letter are strictly for VADEQ consideration and do not constitute approval or disapproval decisions under CWA 303(c). Neither are these comments a determination by the EPA Administrator under CWA Section 303(c) (4) (B) that revised or new standards are necessary to meet the requirements of the Act.

§ 9 VAC 25-260-140. Table of Parameters Cadmium

In 2016, EPA updated its national recommended aquatic life ambient water quality criteria for cadmium to reflect the latest scientific information. The updated criteria account for many new laboratory toxicity tests with cadmium. In addition, the effect of total hardness on cadmium toxicity was also revised using the newly acquired data. EPA is pleased to see that Virginia is updating its cadmium criteria to be consistent with EPA's national recommended aquatic life ambient water quality criteria for cadmium.

§ 9 VAC 25-260-140. Table of Parameters Criteria to Protect Human Health

In June 2015, EPA published final updated ambient water quality criteria for the protection of human health for 94 chemical pollutants. These updated recommendations reflect the latest scientific information and EPA policies, including updated body weight, drinking water consumption rate, fish consumption rate, bioaccumulation factors, health toxicity values, and relative source contributions. Virginia in its Proposed Regulation Agency Background Document

states that amendments are proposed to update 94 human health criteria parameters. However, the Table of Parameters shows only 93 human health criteria being updated. Silvex (2-(2, 4, 5-Trichlorophenoxy) propionic acid) is one of the 94 chemical pollutants that EPA updated and is missing from Virginia Table of Parameters. Since VADEQ states it intended to adopt all 94 updated ambient water quality criteria for the protection of human health, not including Silvex in your proposed amendments seems to be an oversight. EPA requests that Virginia consider adopting EPA's 2015 updated Silvex water quality criteria for the protection of human health.

§ 9VAC25-260-155. Ammonia Water Quality Criteria

EPA has published national recommended ambient water quality criteria for the protection of aquatic life from the toxic effects of ammonia, a constituent of nitrogen pollution. EPA recommends an acute criterion magnitude of 17 mg TAN/L and a chronic criterion magnitude of 1.9 mg TAN/L at pH 7 and 20°C, with the stipulation that the chronic criterion cannot exceed 4.8 mg TAN/L as a 4-day average. All criteria magnitudes are recommended not to be exceeded more than once in three years on average. That is EPA's chronic ammonia criteria recommendation has two components: 30-day average limit and a 4-day average limit that is not to exceed 2.5 times the chronic criterion in a 30-day period. While Virginia is proposing to adopt the 30-day average, it does not appear to be adopting the 4-day average limit. EPA recommends that Virginia include the 4-day limit as part of its ammonia criteria.

§ 9 VAC 25-260-170. Bacteria Criteria

In 2012, EPA finalized its updated recommended national water quality criteria for the protection of recreational uses (EPA-820-F-12-058). The resulting criteria apply to all waters designated for primary contact recreation and are comprised of a magnitude, duration, and frequency of excursion for both the geometric mean (GM) and the statistical threshold value (STV). It is important for states to adopt the magnitude, duration, and frequency components of the criteria to be consistent with EPA's recommendations and to be fully protective of the primary contact recreation designated use. EPA recommends a 30-day duration for the GM and STV to be an optimal duration period to capture both short-term and long-term variability of exposure conditions to protect recreational uses but also considers a duration of up to 90 days to be acceptable based on the epidemiological studies used to develop EPA's 2012 criteria.

According to the Virginia Proposed Regulation Agency Background Document: Virginia's amendments include a GM value as well as a STV. The GM is a never-to-be-exceeded value, and the STV should not be exceeded by more than 10% of the samples taken. Virginia proposed Bacteria criteria is as follows (new language is underlined):

- E. coli bacteria shall not exceed a monthly geometric mean of 126 CFU/100 ml in freshwater and no more than 10% of the samples in the assessment period shall exceed a Statistical Threshold Value (STV) of 410 CFU/100 ml.

- Enterococci bacteria shall not exceed a monthly geometric mean of 35 CFU/100 ml in transition and saltwater and no more than 10% of the samples in the assessment period shall exceed a Statistical Threshold Value (STV) of 130 CFU/100 ml.

The magnitudes for E. coli and enterococci are consistent with EPA recommendations, but for the criteria to be wholly consistent, EPA has the following recommended revisions:

VADEQ needs to specify the duration for the criteria (i.e., the period of time over which the magnitude is calculated) rather than "assessment period." EPA recommends a 30-day duration interval, and will accept up to a 90-day duration.

For the frequency of the criteria, the maximum number of times the pollutant may be present above the magnitude over the specified duration, Virginia's proposed text is expressed as a percentage of samples in the assessment period that can exceed the STV, whereas EPA's language is that the STV should be exceeded no more than 10% of the time. The number of samples, to be collected by a state in determining if WQS have been exceeded, is not an approvable element of a WQS package (*Florida Public Interest Research Group vs. EPA*, No. 4:02cv408-WS (N.D. Fla. Feb. 15, 2007)). Therefore, states should not include a sample size as part of their criteria submission.

EPA recommends VADEQ revise the duration and frequency components of its bacteria criteria to be consistent with EPA's recommend duration interval of 30-days, or up to 90-days, and frequency components not be greater than the selected GM and not be greater than a ten percent excursion frequency of the selected STV in the same duration interval.

Secondary contact recreational (SCR) uses: Virginia deleted its secondary contact recreation use in its entirety. Please clarify if there is any water body that was previously designated for SCR and if they are now covered by the revised bacteria criteria that protect for primary recreation. Also, Virginia deleted Section B (which appeared to specify which waters were designated for SCR) but still has a reference to Section B in Section A. Are there are any waters where the bacteria criteria specified in Section A do not apply? Please clarify.

Thank you for this opportunity to provide comments on Virginia's review of its WQS regulation. If you have any questions regarding these comments, please feel free to contact Cheryl Atkinson at (215) 814-3392 or via email at atkinson.cheryl@epa.gov.

Sincerely,



Evelyn S. MacKnight, Associate Director
Office of Standards, Assessment & Total
Maximum Daily Load

